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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/891,531	06/27/2001	Joun Ho Lee	8733.451.00	3199

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EXAMINER

KIELIN, ERIK J

ART UNIT	PAPER NUMBER
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2813

DATE MAILED: 02/04/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/891,531

Applicant(s)

LEE, JOUN HO

Examiner

Erik Kielin

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-- The MAILING DATE of this communication appears on the front cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the laser welded connection between the transparent conductive electrode and the common electrode (claims 6 and 16) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

4. Claims 1-5, 9, 10 and 11-15, 17, 20, 21 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,452,656 B2 (Niwano et al.).

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Regarding claims 1 and 11, **Niwano** discloses an in-plane switching mode LCD device and method of forming the LCD comprising:

first **1** and second **30** substrates;

data line **3** (called "signal line" in **Niwano**) and gate line **2** (called "scanning line" in **Niwano**) on the first substrate to define a plurality of pixel regions (Fig. 19a);

at least one data electrode **5** (called "driving electrode" in **Niwano**) on the first substrate;

at least one common electrode **8** on the first substrate;

a transparent conductive film **6** (called "opposite electrode" in **Niwano**) electrically connected with the common electrode **8** (Fig. 24a; col. 9, lines 54-61 -- especially line 59); and

a liquid crystal layer **11** between the first and second substrates.

(See also section entitled "Embodiment 2" in cols. 11 and 12.)

Regarding claims 2 and 17, the transparent conductive film includes indium tin oxide (ITO) as indicated at col. 9, lines 54-61.

Regarding claim 3, a gate insulating film **9** is on the common electrode **8** (Fig. 24a).

Regarding claim 4, a passivation film **10** is on the common electrode **8**.

Regarding claims 5 and 14, the common electrode **8** is electrically connected with the transparent conductive film **6** through a contact hole **18** (Fig. 23a-24a) in the passivation film **10**.

Regarding claim 9, the transparent conductive film is formed outermost to the common electrode (Fig. 19a).

Regarding claims 10 and 21, the transparent conductive film **6** extends toward the data electrode **5** (Fig. 24a).

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Regarding claim 12, the common electrode 8 is selected from the group of consisting of Al, Cr, Ti and Al alloy. See col. 9, lines 5-11 which indicates that the signal line 2 is formed of the instantly claimed materials. See Fig. 20a and associated text in col. 12, lines 3-6 which indicate that 2 and 8 (the common electrode) are formed simultaneously and are shown to be of the same material. Accordingly the common electrode 8 is formed of the same materials as the layer 2.

Regarding claim 13, the step of forming a passivation film 19 on the data electrodes is disclosed in Fig. 42a. (See also col. 17, lines 28-32.)

Regarding claim 15, the step of electrically connecting the common electrodes with the transparent conductive film is disclosed in Fig. 24a, as noted above.

Regarding claim 20, the transparent conductive film is formed outmost to the common electrodes (Fig. 19a).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 6 is rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over **Niwano**.

Although the common electrode is not indicated to be electrically connected with the transparent conductive film through a laser welding process, this limitation does not have

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patentable weight in the absence of differences between the electrical connection disclosed in **Niwano** and that produced by laser welding.

Note that a “product by process” claim is directed to the product per se, no matter how actually made, *In re Hirao*, 190 USPQ 15 at 17 (footnote 3). See also *In re Brown*, 173 USPQ 685; *In re Luck*, 177 USPQ 523; *In re Fessmann*, 180 USPQ 324; *In re Avery*, 186 USPQ 161; *In re Wertheim*, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); *In re Marosi et al*, 218 USPQ 289; and particularly *In re Thorpe*, 227 USPQ 964, all of which make it clear that it is the patentability of the final product per se which must be determined in a “product by process” claim, and not the patentability of the process, and that an old or obvious product produced by a new method is not patentable as a product, whether claimed in “product by process” claims or not. Note that applicant has the burden of proof in such cases, as the above case law make clear.

7. Claims 7, 8, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Niwano** in view of Applicant’s admitted prior art (**APA**).

The prior art of **Niwano**, as explained above, discloses each of the claimed features except for indicating the identity of the liquid crystal.

APA indicates that cyano (CN) based and fluorine (F) based liquid crystals are known in the art (instant specification p. 5, lines 6-21).

It would have been obvious for one of ordinary skill in the art, at the time of the invention to use either of CN or F bases liquid crystals as taught by **APA** in the LCD of **Niwano** because **Niwano** is silent to the identity of the liquid crystal such that one of ordinary skill would be motivated to use known liquid crystals such as those indicated to be known by **APA**. Moreover, it

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has been held that the selection of a known material based on its suitability for its intended use is prima facie obvious. The selection of a known material based on its suitability for its intended use supported a prima facie obviousness determination in *Sinclair & Carroll Co., Inc. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945) (Claims to a printing ink comprising a solvent having the vapor pressure characteristics of butyl carbitol so that the ink would not dry at room temperature but would dry quickly upon heating were held invalid over a reference teaching a printing ink made with a different solvent that was nonvolatile at room temperature but highly volatile when heated in view of an article which taught the desired boiling point and vapor pressure characteristics of a solvent for printing inks and a catalog teaching the boiling point and vapor pressure characteristics of butyl carbitol. "Reading a list and selecting a known compound to meet known requirements is no more ingenious than selecting the last piece to put in the last opening in a jig - saw puzzle." 65 USPQ at 301.). See also *In re Leshin*, 125 USPQ 416 (CCPA 1960) ("Mere selection of known plastics to make container-dispenser of a type made of plastics prior to the invention, the selection of the plastics being on the basis of suitability for the intended use, would be entirely obvious; and in view of 35 U.S.C. 103 it is a wonder that the point is even mentioned.") (See MPEP 2144.07.)

8. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Niwano** in view of US 6124851 (**Jacobson**).

The prior art of **Niwano**, as explained above, discloses each of the claimed features except for indicating that the electrical connection between the common electrode and the transparent conductive film is formed through a laser welding process.

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Jacobson teaches that it is known in the art to use laser welding to form electrical connections between ITO (a transparent conducting film) and another metal electrode using laser welding --specifically for display devices (col. 4, lines 19-35).

It would have been obvious for one of ordinary skill in the art, at the time of the invention to use laser welding as taught by **Jacobson** to form the electrical connection in **Niwano** because **Jacobson** teaches that it is an art known means for forming the electrical connection. Moreover, the instant specification provided no indication that there exists some unexpected result by using laser welding as apposed to other known means for forming electrical connections between electrodes.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent Application Publication 2002/0186338 A1 (**Niwano et al.**) is the publication of the application upon which the Niwano patent applied above is based.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erik Kielin whose telephone number is 703-306-5980. The examiner can normally be reached on 9:00 - 19:30 on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, Jr., can be reached at 703-308-4940. The fax phone numbers for the

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organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



Erik Kielin

January 28, 2003.